

Tuberculosis X-Ray Case-Finding Activities United States, 1953

STATE health departments reported that more than 15½ million persons were X-rayed in tuberculosis case-finding projects in the continental United States during the calendar year 1953. This number, which exceeds the number X-rayed in case-finding activities in 1952 by 2 million, is the largest ever reported. Reports were received from all States in 1953.

In Alaska, Hawaii, and Puerto Rico, a half million persons were X-rayed, according to the reports received from these Territories. The State and Territorial reports generally did not include the X-rays taken by Federal agencies, except those taken by the Public Health Service. When the number of X-rays taken by Federal agencies is added to the 16 million reported by the States and Territories, the total number of persons X-rayed in the United States and Territories during 1953 is more than 21 million.

Data on X-ray case-finding activities for each State and Territory, exclusive of Federal agency data, are given in the accompanying table. Although there was an increase of 2 million in the number of X-rays in 1953, not every State reported an increase. Eighteen States, the District of Columbia, and Hawaii reported decreases, and one State, Nevada, reported no X-rays taken in 1952 or in 1953.

Five States—California, Illinois, Michigan, Pennsylvania, and Washington—together reported an increase of approximately 2 million X-rays. A communitywide chest X-ray survey in Pittsburgh and Allegheny County, Pa.,

during which 881,646 X-rays were taken, helped Pennsylvania report the largest number of X-rays taken by any of the States and Territories during 1953.

It is interesting to observe how the increase in the number of X-rays taken affected the coverage of the population. For the continental United States, 9.8 percent of the population were reported examined in tuberculosis X-ray case-finding activities in 1953 as compared with 8.6 percent in 1952; for the United States and Territories, 9.9 percent were reported examined in 1953 as compared with 8.7 percent in 1952. When the number of X-rays taken by Federal agencies is added to the number reported by State and Territorial health departments, 1 out of every 8 persons in the United States had an X-ray examination for tuberculosis during 1953. The percentage of the population examined in tuberculosis X-ray case-finding activities varied from a high of 54.2 percent in Delaware, which had a statewide mass X-ray survey during the year, to 1.1 percent in Vermont and 0 percent in Nevada.

Of the total new cases of tuberculosis reported during the year, 32 percent were first discovered as a result of X-ray case-finding activities in 1953 as compared to 28 percent in 1952. Newly reported cases first discovered as a result of X-ray case-finding activities may include both group A cases (active and probably active cases) and group B cases (arrested, inactive, and other reportable cases); therefore, the percentage is based on the total newly reported cases (group A plus group B) for each State and Territory. For the continental United States, the increase in the percentage of population covered by X-ray case finding brought a proportionate increase in the percentage of the total newly reported cases first discovered as the result of X-ray case-finding activities. In fact, the number of new cases found per 1,000 X-rays in 1953 was about the same as the number in 1952, showing that the yield was not adversely affected by the increase in coverage.

As shown in the accompanying table, the per-

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**Tuberculosis case-finding X-rays taken and number of new cases found, United States and Territories,
calendar year 1953**

State or Territory	X-rays taken		New tuberculosis cases resulting from X-ray screening activities	
	Number	Percent of population X-rayed	Number ¹	Percent of total newly reported cases
Alabama.....	158, 259	5. 1	813	38. 2
Arizona.....	63, 653	6. 8	102	6. 7
Arkansas.....	178, 925	9. 4	372	24. 2
California.....	1, 201, 834	9. 9	² 1, 003	² 12. 4
Colorado.....	136, 245	9. 6	298	21. 2
Connecticut.....	131, 602	6. 1	(³)	-----
Delaware.....	194, 060	54. 2	45	19. 4
District of Columbia.....	163, 543	19. 4	(³)	-----
Florida.....	382, 304	11. 4	188	7. 8
Georgia.....	245, 036	6. 8	² 523	² 25. 1
Idaho.....	58, 322	9. 7	42	24. 9
Illinois.....	1, 371, 984	15. 2	² 914	² 14. 2
Indiana.....	357, 173	8. 6	(³)	-----
Iowa.....	255, 661	9. 8	229	30. 6
Kansas.....	150, 902	7. 5	64	16. 6
Kentucky.....	293, 885	9. 9	1, 436	50. 7
Louisiana.....	315, 024	10. 9	² 621	² 30. 5
Maine.....	55, 129	6. 0	57	14. 4
Maryland.....	258, 548	10. 2	184	8. 4
Massachusetts.....	222, 387	4. 5	⁴ 933	⁴ 65. 0
Michigan.....	752, 454	11. 0	960	17. 0
Minnesota.....	307, 653	10. 1	² 440	² 21. 2
Mississippi.....	208, 646	9. 6	501	40. 3
Missouri.....	264, 278	6. 5	572	22. 8
Montana.....	100, 655	16. 4	121	35. 7
Nebraska.....	114, 916	8. 5	28	10. 4
Nevada.....	0	0	-----	-----
New Hampshire.....	28, 327	5. 4	47	31. 1
New Jersey.....	141, 984	2. 8	² 184	² 4. 4
New Mexico.....	39, 893	5. 3	55	5. 3
New York.....	992, 351	6. 5	⁵ 391	⁵ 9. 7

centage of total new cases first discovered as a result of X-ray case-finding activities varies widely among the States. It ranged from a high of 77 percent for Alaska to 5 percent for New Mexico. The standards used in screening suspects, the characteristics of the population X-rayed, what constitutes a reportable case of tuberculosis in each State, as well as the prevalence of tuberculosis in each State, all contribute to the differences observed among the States.

The percentage of newly reported cases first discovered as a result of X-ray case finding is not directly related to the number of X-rays taken during 1953 because the number of new cases reported as a result of X-ray case finding is not restricted to those persons whose screening films were taken in 1953. Some of the cases

reported in 1953 were reported as a result of screening films taken in 1952, and cases among persons having screening films taken in 1953, especially during the later months, will be reported in 1954.

The States do not have equally efficient procedures for separating the new cases discovered by X-ray screening from cases discovered by other means; consequently, the data reported by some States may be considered as the minimum numbers of new cases found by X-ray case finding. Even with this restriction, however, almost one-third of the new tuberculosis cases reported in the United States during the calendar year 1953 were reported as a result of screening one-eighth of the population. It is possible that many X-rays were taken in segments of the population having high preva-

Tuberculosis case-finding X-rays taken and number of new cases found, United States and Territories, calendar year 1953—Continued

State or Territory	X-rays taken		New tuberculosis cases resulting from X-ray screening activities	
	Number	Percent of population X-rayed	Number ¹	Percent of total newly reported cases
North Carolina.....	592, 984	14. 1	(³)	-----
North Dakota.....	80, 493	13. 0	29	13. 6
Ohio.....	² 879, 039	10. 5	3, 589	54. 1
Oklahoma.....	216, 344	9. 6	464	26. 5
Oregon.....	202, 079	12. 6	192	29. 3
Pennsylvania.....	1, 684, 647	15. 8	(³)	-----
Rhode Island.....	84, 086	10. 3	58	14. 5
South Carolina.....	135, 140	6. 2	191	16. 2
South Dakota.....	65, 573	10. 0	23	10. 3
Tennessee.....	542, 091	16. 3	2, 441	71. 8
Texas.....	447, 106	5. 4	(³)	-----
Utah.....	46, 334	6. 3	15	10. 2
Vermont.....	4, 271	1. 1	95	59. 4
Virginia.....	421, 497	11. 9	(³)	-----
Washington.....	585, 274	23. 6	(³)	-----
West Virginia.....	77, 748	4. 0	278	23. 9
Wisconsin.....	290, 339	8. 3	298	20. 8
Wyoming.....	45, 197	14. 8	23	22. 5
Total continental United States.....	15, 545, 875	9. 8	-----	⁶ 31. 9
Alaska.....	20, 211	9. 9	597	77. 0
Hawaii.....	117, 665	22. 5	236	40. 3
Puerto Rico.....	346, 811	15. 6	1, 389	26. 5
United States and Territories.....	16, 030, 562	9. 9	-----	⁶ 32. 1

¹ May include group B cases; for further qualification, see text. ² Specifically reported as incomplete.
³ Data not available. ⁴ Based on data from Massachusetts exclusive of Boston. ⁵ Based on data from New York State exclusive of New York City and specifically reported as incomplete. ⁶ Rate for areas submitting data.

SOURCE: Annual Tuberculosis Reports, form PHS-1393.

lence rates, but continued examination of these high-prevalence groups is needed to eliminate these reservoirs of infection. It is apparent that X-ray screening for tuberculosis is a pro-

ductive case-finding device and that continued, conscientious use of this device can do much to bring under supervision the large number of unknown cases of tuberculosis in this country.

